Evaluation Using Quantitative Methods

Step 1

Design Your Data Collection Methods

- Write your evaluation questions
- Develop data collection tool (e.g., survey)
- Pilot test data collection tool

Step 2

Collect Your Data

- Decide whether to use a sample or all participants (census)
- Use as many methods as possible to increase response rate (e.g., multiple mailings, personalized pre-survey mailings and cover sheets, incentives)
- Be sure participants receive informed consent (e.g., in survey cover letter) before they start the survey

Step 3

Summarize and Analyze Your Data

- Compile descriptive data (frequencies percentages, averages, medians, modes)
- Put data into tables to aid analysis
- Write a paragraph describing what each table indicates about your evaluation questions

Step 4

Assess the Validity of Your Findings

Describe any shortcomings of your data collection and how it affects your interpretation (e.g., low response rates; problematic questions) Any data that can be counted is considered quantitative data, including attendance at classes or events, participation or drop-out rates, test scores, and satisfaction ratings. Quantitative methods show the *degree* to which certain characteristics are present, such as frequency of activities, opinions, beliefs, or behaviors within a group. They can also provide an "average" look at a group or population. For example, you might use quantitative methods to determine the average number of times workshop participants look up health information online every week.

The advantage of quantitative methods is the amount of information you can quickly gather and analyze. The questions listed below are best answered using quantitative methods:

- 1. How many clinics in our outreach project have bookmarked National Library of Medicine resources on at least one of their computers?
- 2. On average, how much did trainees' confidence in using online health information resources improve after training?
- 3. What percentage of participants in a PubMed training session said their skills in using the resource improved as a result of taking the course?
- 4. How many people visited the resource Website during the grant period?
- 5. What percentage of visitors to a booth at a health fair showed interest in finding prescription drug information online?
- 6. How likely are participants on average to recommend MedlinePlus to others?
- 7. What percentage of users improved their ability to find good consumer health information as a result of our sessions?

Appendix 1 describes some typical methods for collecting quantitative data. The rest of this section will focus on one of the most popular quantitative methods: surveys. This method has been chosen because of its usefulness at all stages of evaluation. Surveys use a standard set of questions to get a broad overview of a group's opinions, attitudes, self-reported behaviors, and demographic and background information. Discussion is limited to written surveys such as those sent electronically or through the mail.